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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,601	08/04/2003	Andrew Roman Gizara		1600
37598	7590	02/28/2005	EXAMINER	
ANDREW R. GIZARA 24471 CORTA CRESTA DRIVE LAKE FOREST, CA 92630			CUEVAS, PEDRO J	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/604,601	Applicant(s) ANDREW ROMAN GIZARA	
	Examiner Pedro J. Cuevas	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 23, 24 and 27-34 is/are rejected.
- 7) ☒ Claim(s) 19-22, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No.

6,184,590 B1 to Lopez.

Lopez clearly teaches the construction of a wave-actuated electricity-generating device comprising an apparatus of power generation (50) using means responsive to a motive fluid wherein:

the motive fluid is free flowing seawater, particularly that which is affected by natural or man-made rises in elevation (Figure 3) of the ocean floor of free flow so as to break oceanic wave motion such that the wave or tidal energy is transferred into accelerating the water itself, from the force of this accelerated water, energy is extracted.

3. Claims 2-4, 6, 10-11, and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,172,689 to Thorsheim.

Thorsheim clearly teaches the construction of a wave power generator comprising an apparatus of power generation using means responsive to a motive fluid, being a free flowing body of water, wherein:

the fluid intake is implemented via a gate or penstock (16), which is:
mechanically able to instantaneously adjust its physical orientation in any direction

(column 2, lines 21-25), to adapt to changes in the direction of the stream-lines of a free flowing motive fluid;

the motive fluid is free flowing seawater, particularly that which is affected bathymetric constriction (36) of free flow so as to break oceanic wave motion such that the wave or tidal energy is transferred into accelerating the water itself, from the force of this accelerated water, energy is extracted;

a shroud (13) which is buoyant so as to optimally extract energy from an upper non-turbulent layer of said free flowing motive fluid, containing vanes () on its exterior to enable it to respond to changes in the direction of said free flowing motive fluid;

said fluid intake having a gate comprised of a plurality of wickets, interior flow vanes, runner blades mounted on an impeller, so as to optimize efficiency over a range of loads and flow velocities;

a mounting system (steering device) in one axis to provide the ability to instantaneously adjust the physical orientation of said fluid intake in any direction; and

an impeller directly driving the rotor of an AC induction generator of sufficient number of poles such that said generator's synchronous frequency is much lower than the average rotational velocity of said fluid coupler or impeller thus operating said AC induction generator most of the time in the generator region of its torque-slip curve.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2834

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5, 7-9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 4,172,689 to Thorsheim in view of U.S. Patent No. 4,313,059 to Howard.

Thorsheim disclose the construction of a wave power generator as disclosed above.

However, it fails to disclose a screen covering the fluid intake.

Howard teach the construction of a sea current energy system comprising a drag inducing mesh (28) covering the fluid intake for the purpose of keeping the generating system free of debris.

It would have been obvious to one skilled in the art at the time the invention was made to use the mesh disclosed by Howard on the wave power generator disclosed by Thorsheim for the purpose of keeping the generating system free of debris.

6. With regards to claims 7 and 8, it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 284 (CCPA 1954).

7. With regards to claim 9, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a singular DC stepper motor with corresponding shaft and gearing, since it has been held that broadly providing a mechanical or automatic means to replace manual activity, which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 19-1.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,172,689 to Thorsheim in view of U.S. Patent No. 3,687,567 to Lininger.

Thorsheim disclose the construction of a wave power generator as disclosed above.

However, it fails to disclose a short rail system.

Lininger teach the construction of a wave power generator comprising tracks (40, 41) and roller wheels (42,43) forming a rail system for the purpose of reciprocating the system up and down a beach toward the water.

It would have been obvious to one skilled in the art at the time the invention was made to use the tracks disclosed by Lininger on the wave power generator disclosed by Thorsheim for the purpose of reciprocating the system up and down a beach toward the water.

9. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,172,689 to Thorsheim in view of U.S. Patent No. 3,455,159 to D. G. Gies, Sr.

Thorsheim disclose the construction of a wave power generator as disclosed above.

However, it fails to disclose sensing the motion of the mounting system.

D. G. Gies, Sr. teach the construction of a nautical weather station comprising a combination drift and vertical wave motion sensor (18) for the purpose of logging position data and location information.

It would have been obvious to one skilled in the art at the time the invention was made to use the drift and vertical wave motion sensor disclosed by D. G. Gies, Sr. on the wave power generator disclosed by Thorsheim for the purpose of logging position data and location information.

10. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,172,689 to Thorsheim in view of U.S. Patent No. 4,490,232 to Lapeyre.

Thorsheim disclose the construction of a wave power generator as disclosed above.

However, it fails to disclose the output of the generator being electronically voltage and current regulated for performing electrolysis of water.

Lapeyre teach the construction of a wave-powered electrolysis of water system comprising a generator (20) which output is electronically voltage and current regulated for performing electrolysis of water for the purpose of powering electrolyzer (26).

It would have been obvious to one skilled in the art at the time the invention was made to use the generator disclosed by Lapeyre on the wave power generator disclosed by Thorsheim for the purpose of powering an electrolyzer.

11. Claims 27-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,172,689 to Thorsheim in view of U.S. Patent No. 3,455,159 to D. G. Gies, Sr. as applied to claim 18 above, and further in view of U.S. Patent No. 4,369,375 to Romano.

Thorsheim in view of D. G. Gies, Sr. disclose the construction of a wave power generator as disclosed above.

However, it fails to disclose a microprocessor controlling the adjustable parameters of the system.

Romano teach the construction of a system for power generation from tidal changes comprising a microprocessor (computer) for the purpose of monitoring tidal heights, power output, and operate the valves of the chamber ports so as to maintain essentially optimal, continuous power output.

It would have been obvious to one skilled in the art at the time the invention was made to use the microprocessor disclosed by Romano on the wave power generator disclosed by Thorsheim in view of D. G. Gies, Sr. for the purpose of monitoring tidal heights, power output, and operate the valves of the chamber ports so as to maintain essentially optimal, continuous power output.

Allowable Subject Matter

12. Claims 19-22 and 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter.

The prior art of record, taken alone or in combination, does not teaches the construction of a power generation apparatus as described on dependent claim 17, wherein:

the voltage output of said generator being sensed to control a gate which inhibits flow to reduce the rotational velocity of said impeller, thus reducing the forces of gyroscopic precession, so to quicken the response to changes in the direction of the streamlines of the free flowing motive fluid; or

the voltage output of said generator being sensed to control adjustable interior flow vanes and adjustable runner blades of the impeller by employing a voltage feedback closed loop so as to optimize efficiency over a range of loads and flow velocities; or

the voltage output of said generator being electronically voltage and current regulated for charging any of the presently available varieties of chemistry of battery; or

the voltage output of said generator being electronically voltage and current regulated for driving a DC motor mechanically coupled to a synchronous AC generator with output armature voltage applied directly to the utility power grid; or

further energy may be extracted by implementing an auxiliary DC generator or AC induction generator with external voltage rectifiers indirectly coupled through a system of gears to an axis of the mounting system.

Art Unit: 2834


Conclusion

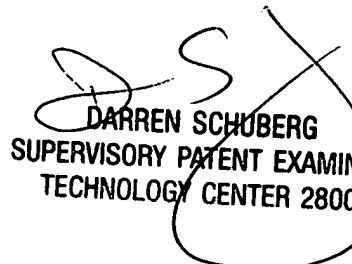
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (571) 272-2021. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Pedro J. Cuevas
February 22, 2005


DARREN SCHUBERG
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